Volga Germans). Check points on the Ukrainian-Russian border sought to prevent Ukrainian peasants leaving, and those who succeeded in doing so and came back with bread had the bread confiscated.

This was no longer part of the attack on private farmers which had killed or deported some ten million, the regime's main enemies over the whole USSR, in 1930-1932. By mid-1932 collectivization was virtually complete, and it was the poor, collectivized peasantry of the Ukraine which was now attacked.

The campaign started with a decree issued in mid-1932 setting grain procurement targets which could not possibly be met. Vasily Grossman, the famous Stalin Prize novelist, writes in his last, secret, book Forever Flowing, "I think there has never been such a decree in all the long history of Russia. Not the Tsars, nor the Tatars ... ever promulgated such a terrible decree. For the decree required that the peasants of the Ukraine, the Don and the Kuban be put to death by starvation, put to death along with their little children".

First all the grain was taken; then even the seed grain; then the houses and yards were searched and dug up, and any little store of bread seized. They lived on a few potatoes; then on birds and cats and dogs; then on acorns and nettles; and in early spring they died.

We have hundreds and hundreds of accounts of the horrors of the time, of infants dying in their mother's arms, of executions for taking a few ears of corn, of families and whole villages perishing, of cannibalism, of emaciated orphaned children -- the "homeless ones" -- roaming the countryside in bands.

There is no doubt that this was a conscious act of terror against the Ukrainian peasantry. Stalin had called the peasants the crux of the national question, and over this period the Ukrainian villages were persistently denounced for harbouring nationalists. At the same time, the other strong-point of Ukrainian nationality, the country's educated elite, was attacked: the cultural institutions were purged, sometimes even dissolved, and hundreds of leading writers and academics made public or private "confessions" and went to the execution cellars or the

labour camps; and the independent Ukrainian Orthodox church was similarly crushed.

Even on the inflated official Soviet figures of the faked 1939 census, there is a deficit of 10-11 million Ukrainians in this decade; and the actual deaths in the terror-famine can be estimated with reasonable accuracy as about 7 million, of which 2-3 million were children, mainly under six or seven years old.

Stalin's knowledge of what was going on has sometimes been questioned, just as there are those who hold that Hitler was unaware of the Final Solution. In fact, it is perfectly clear that he had accurate reports from a variety of sources: indeed in Khrushchev's time Pravda gave a clear account of such first hand reporting to him by a prominent Ukrainian Communist. His aim was to crush the Ukraine, his method that practiced by Jenghiz Khan and Tamerlane, the "laying waste" of the refractory nation.

Ukrainians in the West refer to the period as the "forgotten Holocaust". It was well reported at the time in the West -- by Malcolm Muggeridge, for instance -- but Stalin simply denied that there was a famine, and took in a few distinguished visitors with show farms, so that progressive Westerners could dismiss, or at any rate forget these events, as George Orwell complained.

One reason for this lack of attention is, I think, ignorance in the West of the power of Ukrainian nationhood, the strength of Ukrainian national feeling. In this century the country was only independent for a few precarious years, and we are inclined to think of it as always having been part of, even a natural part of the Russian Empire or the Soviet Union. But this is historically and emotionally false.

An important continuity between the Ukrainian holocaust and our own time is provided by the fact that the USSR is ruled by the same regime and party, and that the present Kremlin leaders were young adults starting their political careers in the early thirties, just at the time when that Party was throwing its younger and more brutalized elements into the struggle with the men, women and children they regarded as class enemies, the starving peasantry of the Ukraine.

STATEMENT OF JAMES R. MILLAR, PROFESSOR OF ECONOMICS

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

COLLECTIVIZATION AND ITS ECONOMIC CONSEQUENCES

"One must crack eggs to make an omelette."

"One cannot expect a chick and an omelette from the same egg."

Peasant proverbs

Introduction

The first peasant axiom quoted above is a statement about politics, about the need to mobilize forces to overcome political inertia. The second statement is about economics: in a world in which resources are scarce, one can increase egg production in the future only by foregoing an omelette today. Both concepts have been used to justify forced, mass collectivization of agriculture in the USSR. The conflict between the two statements is, however, obvious. The destruction and dislocation of population, production and capital that resulted from collectivization reduced the capacity of the economy to produce agricultural products both in the short run and the long run.

I shall argue in what follows that there was no economic rationale for mass collectivization, that it did not somehow contribute to growth of Soviet economic capacity. Quite the contrary. The justification for cracking eggs, if there is one, must be on political grounds, and I must admit that the case is yet to have been made unambiguously for political justification. As an economic policy collectivization was a mistake, pure and simple. The same may have been the case politically, but I leave that assessment to my political science colleagues.

One may well wonder what difference it makes today whether a viable economic rationale existed for mass collectivization. There are two main reasons why it does matter. First, Soviet economic development has been considered a possible model for economic development elsewhere in the less developed world. If it was a mistake economically, we can help other countries avoid a very costly error. Second, the institutions we regard as uniquely characteristic of Soviet socialism today were forged in the crucible of mass collectivization between 1928 and about 1935. This was the principal element of what is usually called the "second" Bolshevik revolution.

The peasantry was a participant, and thus an ally, albeit unwittingly, of the Bolsheviks during the Great October Revolution of 1917. The second revolution was carried out from above by the state against the peasantry. It was a kind of preemptive war in which the state and its urban supporters sought to impose control over the peasantry in the name of economic progress. The war ended in a compromise which still defines the fundamental relations between the countryside on the one hand and the state administration, party and the urban population on the other.

The Economic Consequences of Mass Collectivization

Collectivization created a structure, therefore, that still stands (although in modified form), and it was based upon a set of attitudes toward agricultural production, private enterprise and rural life that still prevails to influence agricultural policy today.

The compromise that ended peasant resistance to collectivization satisfied neither party. The state did attain collective ownership and management of the bulk of agricultural land and capital, and it was thus able thereafter to govern the application of land, labor and capital in the countryside and to command the main marketing channels for agricultural staples and raw materials. But one-third of the capital stock was destroyed in the process

as peasants preferred to destroy their animals rather than contribute them to the collective, and private agriculture was allowed to continue on small land plots collective farmers were awarded conditional upon the contribution of a minimum number of labor days to the collective. Peasant families were allowed to use their plots to grow products for their own consumption and for sale on private markets.

The compromise between the state and the peasantry meant, therefore, that collectivization was less than complete. It produced a division of labor between large-scale collective (and state) farms and tiny private plots not unlike the division of labor following emancipation of the serfs in the 1860s. The Bolshevik state ensured itself a labor force by offering the peasants what had been called "hungry plots" following the emancipation. Hungry plots were plots too small to live on, but too large to refuse. Thus the Bolsheviks succeeded in recreating in the 1930s the kind of interdependence between large-scale farms and small individual plots that had been characteristic under the tsars. Even today the economic interdependence between collective farm and private plot is such that restrictions placed on private plot agriculture reduce collective output too.

The compromise that was established by collectivization had other long run implications as well. The decision to permit continuation of private agricultural production implied continuation of private marketing of agriculrual products as well. Thus private enterprise, albeit very small in scale, and free markets were permitted to continue to operate. The collective-farm market still retails approximately 25% of the value of all agricultural products purchased by the population today, and it is the model for the second economy, where quasi-legal and illegal private transactions in nonagricultural products take place in contemporary Soviet society.

The settlement that followed collectivization also strengthened the role of the state as the protector of the urban-industrial population and thus the guarantor of food supplies from the agricultural sector. The quest for stable prices in state retail outlets in urban areas led the state to suppress price increases as a benefit to urban workers. The result over time has been to require huge subsidies to keep nominal prices low for urban consumers and thus to make queuing for food products a major activity of all adult Soviet citizens.

The Structure of Collectivized Agriculture in the 1930s*

By the end of the 1930s the structure of Stalinist agriculture was in place, and it remained essentially the same until 1958. The sovkhoz, or state farm, which was organized along the same lines as the state enterprise, with paid employees and state-financed investment outlays, worked only a trivial proportion of all agricultural land in the Soviet Union until the 1950s. Thus the system of agriculture that emerged from collectivization consisted of the kolkhoz, the state agricultural procurement system, and the private plot of the kolkhoznik. All capital of the kolkhoz was contributed to an indivisible fund, and it is called thus to this day because no member may claim any portion of it should he elect to withdraw from the collective — despite the fact that all members of the kolkhoz collectively "own" the capital stock. Unlike the state farm, the kolkhoz has always been obliged to finance all investment in the farm out of earnings or through long-term, interest-bearing loans from the state bank.

As I have indicated, one deleterious consequence of the way collectivization took place was the destruction of one-third of the capital stock of agriculture. As a result most kolkhozes began existence with a serious capital shortage. They had too little draft power to plow and cultivate the land, and they were seriously short of means of transportation as well. The state consequently was obliged to purchase tractors and trucks and to put them at the disposal of collective farms. A system of stations, called machine tractor stations (MTS), was developed for this purpose. Each was staffed with personnel who operated the equipment for the kolkhozes it served for an in-kind rental charge. Each station served several kolkhozes, and each was responsible for maintaining the equipment. The development of the

MTS system required much more agricltural equipment than had been called for in the first five-year plan, and acquistion of tractors involved spending precious foreign exchange.

Government procurement of agricultural products involved four principal channels once the entire system was in place. The MTS system, which persisted until 1958, was a creature of the state budget; and the in-kind payments it received from kolkhozes represented an important procurement channel. Norms based upon size and fertility of available land were established by government procurement agencies for each farm, and all were obliged to deliver fixed quantities of various products at very low prices. These deliveries were called obligatory deliveries. Once these targets and MTS rental payments had been met, collective farms were allowed to sell the remainder of their crops either to the government for prices considerably higher than for obligatory deliveries (this was call the "zakupka"), or to sell their surplus on the CFM at whatever price they could command. Finally, certain crops could be sold directly to state enterprises — such as those producing sugar beets or flax, for example — for prices negotiated in advance. This channel was called kontraktatsiia.

The government's sources of agricultural products included, therefore, these four channels, plus an in-kind tax on the products of private agriculture. The bulk of procurements was in kind, and this reflected the general depecuniarization of agriculture that was effected by collectivization. The average price received by collective farms for their products from the state was below cost of production, a fact which led many superficial observers to conclude that the government was acquiring agricultural products on the cheap, and from which it seemed to follow that collectivization had been an economic success. That the standard of living of the peasantry fell as a result of the establishment of the collective farm and the predatory state procurement system persuaded these observers that industialization was made possible by the "pumping of resources out of agriculture."

There is no question but that, taken together, the collective farm system and the state procurement system formed an effective device for forcing output out of the agricultural sector. The entire system was not in place, however, until well into the 1930s, and it was very costly to estabish. In addition, it was a system that depended more upon disincentives than upon incentives, and it was never able to stimulate productivity, efficiency, or even reliability in agricultural production. The notion that collectivization was initiated in order to create this particular system is without foundation. It is far more accurate to see the system that evolved by the end of the first five-year plan as one designed to minimize the cost of collectivization, to staunch the arterial loss, than to see it as the end which shaped a decision to collectivize. The evidence that we have on the contribution of agriculture to Soviet rapid industrialization shows that resources flowed on a net basis from nonagricultural sectors to the agricultural sector and not vice versa, as so many have assumed was the case during the first five-year plan.

Collectivization cost more to establish than it yielded. The loss of capital stock and the consequent sharp decline in total agricultural production was not made good until the end of the 1930s. State investment in the MTS system and in the development of state farms required a large flow of capital into the agricultural sector, but the state received no net return for it because even this large, unanticipated flow of capital failed to replace what had been destroyed in peasant anger. The transport of millions of peasant farmers (kulaks) to Siberia was also damaging, because the best farmers were the most likely to be singled out. Finally, the compromise that allowed the persistence of private farming on tiny hungry plots and that permitted private sales of products on the CFM left open a channel through which the peasants could shift a substantial proportion of the cost of collectivization to the urban population. The rise in prices on this market and the flow of goods through it, even though of small physical volume, ensured that the terms of trade would turn in favor of the agricultural sector, rather than the other way around as Preobrazhensky had proposed and Stalin claimed to have effected. The CFM tail wagged the dog during the 1930s.

In economics, unlike a poker game, everyone can lose from a mistake. Collectivization was an economic policy mistake in the short run, and the evidence we have on the long run suggests the same. Mass collectivization produced losses without anyone, including the state, deriving a benefit. The idea that all of the suffering, the famine, the brutality, and the grief that collectivization occasioned went for naught is more than many students can understand, but the evidence suggests that this was the case.

The system of collectivized agriculture remained essentially unchanged from the middle 1930s until the middle of the 1950s, and in many ways it represented the keystone of the Stalinist economy. It became an article of faith, and I believe that its importance for Stalin and others who might be called Stalinists today was threefold. First, the system put an end to private enterprise in the form the Bolsheviks most distrusted - peasant private enterprise. Second, the system of collectivized agriculture represented a large, essentially depecuniarized sector, and it appealed to those like Stalin who believed that the future of the Soviet system was one in which "commodity relations" and "commodity production," which Western economists call markets and pecuniary institutions, ought to be eliminated. Third, by structure and operation the sector reflected the state's preferential treatment of the worker and its predilection for industrial production. As a result of collectivization the rural population was isolated from the developing sectors of the Soviet economy, and its economy and population became even more backward relative to the urban-industrial than had been the case in 1928. The social, educational, and technical backwardness of both the people and the enterprises in the Soviet rural sector persists to this day and does not appear to be diminishing rapidly.

The Long-Term Consequences of Collectivization

Many reforms have been proposed and implemented since the 1930s, most of them since Stalin's death in 1953. Collective farms have been repeatedly consolidated into larger and larger units, and many have been converted into state farms. The MTS was abolished in 1958 along with the old four-channel procurement system. Prices paid by state procurement agencies have been raised many fold. In kind transactions have all but disappeared. Heavy investments have been made in plant and equipment and in human capital too. Pensions are available to farmers now, and a minimum annual wage is guaranteed.

Western observers of these reforms and investments have agreed that they were necessary and in the right direction. Agricultural output has increased substantially also. When you consider that output per capita in 1953 was approximately what it had been in 1928 before collectivization (and, of course, the devastation of WWII), and that 1928 output was about the same as had been attained prior to WWI and the revolution, the growth of output following Stalin's death is striking. Per capita consumption has more than doubled in value.

Soviet agriculture has not failed, but it has been disappointing in two respects. The rate of growth has stagnated in recent years and the cost of achieving the large increase that took place between 1953 and the 1970s was extraordinary. Rebuilding an agricultural sector that was badly damaged by collectivization and by relative neglect proved to be much more costly and difficult than had been anticipated. The theory of unbalanced growth, in which a sector is neglected in favor of development of a preferred sector which, when modernized, will turn about and pull the neglected sector up to date does not seem to work.

Huge quantities of resources have been devoted to agriculture since Stalin's death, but the population remains dissatisfied with the quantity, composition and quality of agricultural products available in state retail outlets. The situation presents a real dilemma for the Soviet leadership, a dilemma of its own making. Preferential treatment of urban-industrial population has led to enormous subsidies of food products sold through state outlets. Prices are

so low on some goods, such as red meat, that stocks disappear upon arrival. Clerks cannot but be tempted to collect the difference between what the market price would be and what is actually charged, which puts them in violation of the law. Farmers are tempted to purchase farm products retail and deliver them to the state for the higher wholesale prices it pays for procurements. The population at large complains about queues, but complains even more strongly (and sometimes riots) when price increases are threatened. Much of this pervasive and endless economic irrationality is a legacy of collectivization.

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Conclusion

Radical changes in agricultural tenure and production systems have rarely taken place in history. The margin of error is usually small and the consequences of failure horrendous. The Soviet experiment with mass collectivization is clearly a case in point. It was based upon a false economic premise: that rapid development would require "squeezing" the peasantry and it therefore failed to provide the resources that were anticipated. It also failed in the short run to feed the population, and a terrible famine ensued. In the long run, Soviet agriculture has gradually been overcoming the persisting adverse consequences of collectivization, but the end is not yet in sight. The Soviet population is not hungry, and it is very unlikely to suffer serious famine again (in the absence of some major catastrophe). At the same time it is not satisfied with the performance of Soviet agriculture and it will not soon find satisfaction.

The fact is that collectivization was founded upon a mistaken premise, one that has been abandoned today by Soviet leadership. Economic growth need not be an exploitative process. Collectivization and its awful consequences might have been avoided had the Bolsheviks considered another old Russian proverb as the basis of the relationship between industrial and agricultural sectors: "One hand washes the other."

* This section has been adapted from my recent book, The ABCs of Soviet Socialism (University of Illinois Press, 1981), pp.26-29.

STATEMENT OF REV. WOLODYMYR BAZYLEVSKY, PASTOR

ST. VLADIMIR'S CATHEDRAL, NEW YORK, N.Y.

The Great Famine in Ukraine in the Years 1932-33

In the years 1932-33 more than 7 million innocent Ukrainian men, women and children perished in an artificially created famine. This attrocity was deliberately planned as repressive and terrorizing measure by the Communist government in Moscow.

I was a young man in my late 20's living in Eastern Ukraine. I was an eye-witness to all that was happening.

Ukraine is known as the "bread basket" of Europe, it's soil being one of the richest in the world. Ukrainian farmers found joy in working their fields. Their toil and harvest was their life. Suddenly a new form of life was being foisted off on them -- collective farming - "kolhospe". The freedom loving farmers resisted.

Communist Moscow used varied methods in order to repress and terrorize the Ukrainian people's resistance. They levied unbearable quotas on grain. When the farmers were not able to pay, their property was confiscated and the owners were imprisoned and sent to Siberia. The Communist government decided to step up the process of collectivization by taking away (rozkurkulennia) land from persons who owned more than 10 hectars, under the pretext that the owners were exploiters of the masses. They, too, were sent to Siberia.

Another method of fighting resistance was by staging trials. I witnessed such a mockery of justice in the early 1930's. This took place in a village of Barvinkowo, province of Izium, near Kharkiv, where I was employed as a school teacher.

One fall day all the teachers were instructed to attend a court case where "enemies of the people" would be on trial. We saw an old sickly man, Ivan Medvid, being brought before the tribunal, held in a classroom. The so-called "judge", Mr. Shulha, was also the principal of the school. (In actuality, he was a half-literate former factory worker). The "judge" took out a blank piece of paper and read from it, as if there were something written, a verdict. Due to the fact that I. Medvid did not comply with the government's previously imposed quota of grain to be donated to the government', ', he is subject to arrest and prosecution. His house and property is to be confiscated and auctioned off.

Mr. Medvid was arrested immediately by officer Pazushko and led away to the police station. Meanwhile, all the people that were made to witness this mockery of justice were further "invited" to attend the auction. The belongings that were being sold were tattered. Mr. Medvid was the only remaining male

member of his family which consisted of about 10 members - women and children. They collectively had owned over 10 hectars of land - hence the punishment.....

The following day, Mr.Shulha (the judge) jokingly related to us, how he read the verdict from a blank piece of paper to the "kurkuls".* What could one do when there were so many court cases and no time to write the verdicts?

A few months later, at night, all the teachers were called to the Party Headquarters and were informed that we would be further obliged to carry out the Party decision to liquidate the "kurkuls"*. Each one of us was to go to the surrounding villages and arrest the "Kurkuls"* and send them to a desolate rail-road station in Yazykovo. Suddenly this order was changed and only Communist Party and Komsomol members were obliged to carry out this action. We the non-Party people were sent home.

We later found out from people who took part in this action that hundreds of Ukrainian farmers were brought by wagons and loaded into cattle trains. This included small children, as well as old people. They were permitted only a small bundle each. They were loaded 40 to 50 persons per car - no food and no water. Some died during the journey, the rest froze or starved in Siberia.

However, when even these methods could not break the Ukrainian spirit and the opposition to a way of life which was unthinkable to them, Kremlin gave birth to a plan which would physically exterminate parts of Ukrainian population.

To carry out this plan they mobilized 25,000 workers, mainly from Moskow and Leningrad who were sent to Ukrainian collective farms as "advisors" to instruct Ukrainian farmers in how to be more officient.

In truth, these people organized the local party members into brigades which went from farm to farm taking away every last bit of grain. Later they went from house to house in the villages taking potatoes, sourkraut, pickles, even cooked food off the stoves. They pierced clay floors to make sure no food was burried, often demolishing ovens and walls.

Inhabitants of villages were virtual prisoners. In order to travel anywhere, or to buy a ticket at a railroad station, one was required to have a passport and no passports were being issued. They had to stay at home and wait for the unavoidable, terrifying death from starvation. This was compounded by the fact that it took place during the winter months.

People started to die in masses. There were dead bodies in the streets, in houses in yards... From time to time stronger

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* Kurkul - a rich landowner, who supposedly lived off the poor people.

people would go from farm to farm and collect the dead and sometimes even the dying, so as not to have to come back for them.

There were villages in which every one died or very few survived. I saw such a village in the spring of 1933. It was Khrushtchova Mykytivka in the district of Bohodukhiv, province of Kharkiv. I was staying in that part of the country. I also saw dead or dying people at train stations, at forest outskirts, by the roads which I walked.

I lived on the outskirts of Kharkiv in a town named Pisotchyn . Every morning I arrived at the Southern railroad station in Kharkiv and this is where I saw the most starved-to-death bodies. Trucks came and removed them and dumped them 20 - 25 kms. from town into gulleys.

No matter how the militia tried to prevent the hungry people from coming to Kharkiv, many villagers managed to get through and begged in the streets.

I will never forget a family who, judging from their clothing, had seen better days; a husband, wife and 4 or 5 children were sitting in the Blahovishtchenskyj Bazaar Square. All of them with outstretched hands, begging for charity. People gave them money, but the militia quickly arrested them.

I will never forget when I saw a woman giving birth in the street on Kholodna Hora. It was winter and none come to her help. People were probably afraid because, although the press never mentioned the famine, at collective meetings it was said that the people who were starving were "enemies of the people" who refused to work at collective farms and brought this disaster on themselves.

The Great Famine was directed against the Ukrainian farmers. It did not affect blue and white collar workers very much. They received food in exchange for ration cards. Although this was not very much, these people did not die from hunger. On the average, bread was sold at one pound per person. There was also the so-called "commercial bread" available at much higher prices. It was very hard to get, however. One had to stand on line, at times for 12 hours. One 4 lbs. loaf of bread cost 25 rubles and average wage was 100 rubles per month.

It may be of interest, that during the famine, in Kharkiv and in other cities, new type of store appeared, known as "Torgsin" - trade with foreigners. Actually these stores were designed to dig every last cent from the starving people. In exchange for gold or silver, one could buy everything - food, clothing, vodka...

At the time the USSR press dilligently surpressed any news of the famine. This was not surprising. However, what is

curious, is that the Western press at that time failed to report what was happening in Eastern Europe. And the most disturbing thing of all is that to this day it is played down as an "alledged" happening. The eye-witnesses are dying out. Very soon the whole thing will be swept under the carpet, and 7 million people would have died for nothing.

In 1933 Edouard Herriot, Prime Minister of France visited the USSR; he also visited Ukraine. At that time he was shown a "Potomkin" Kolhozp which of course, was set up for just such a visit. It is unfortunate that this misguided head of state announced to the world that there was no famine in Ukraine. I wonder if the country involved was other than Ukraine, whether the world would have been satisfied with the opinion of just one man...

STATEMENT OF ANTON F. MALISH,
CHIEF, EAST EUROPE-USSR BRANCH, INTERNATIONAL ECONOMICS DIVISION,
ECONOMIC RESEARCH SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE,
BEFORE THE
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY, U.S. SENATE
NOVEMBER 15, 1983

Mr. Chairman, thank you for the opportunity to take part in this discussion of Soviet agriculture. At USDA, we closely monitor the Soviet agricultural situation and outlook. We think this information is useful in determining which economic factors motivate the Soviets to participate in the international trade of agricultural commodities.

Mr. Chairman, U.S.-USSR trade consists primarily of the flow of U.S. agricultural commodities from the United States to the USSR (table 1). In 1982, for example, agricultural commodities accounted for almost three-quarters of all U.S. exports to the Soviet Union. The mix of commodities remains heavily weighted in favor of wheat and corn; in 1982, these two commodities made up nearly 90 percent of the value of those agricultural exports.

The flow of these commodities, representing at various times up to a fifth of our corn exports and up to a sixth of our wheat exports, is affected by a wide range of influences. However, the most important of these now is the long-term Soviet goal of increasing meat consumption against a domestic feed production base often insufficient to sustain an animal inventory larger than that in the United States. We expect that this feed/livestock relationship, and the Soviet policies affecting it, will continue to be the primary force driving U.S. agricultural exports to the USSR in the 1980's.

One important factor likely to influence these trends is the USSR's recently adopted "Food Program." Since that term was first introduced at the October 1980 plenum of the Central Committee of the Communist Party, the East Europe-USSR Branch members devoted considerable energies toward identifying the major elements of that program, analyzing its chances for success, and in converting that analysis to a context that serves the needs of U.S. policy makers at a variety of levels. 1/

The Food Program was closely connected with General Secretary Brezhnev. Its roots can be easily traced to the March 1965 plenum that marked the debut of Brezhnev's agricultural policies. Therefore, the new leadership could have quietly disassociated itself with the program. However, it has not done so. Instead, the Food Program was cited in General Secretary Andropov's speech celebrating the 60th anniversary of the USSR, and it remains a highly visible component of Soviet domestic policy.

1/ See, for example, USDA, Agricultural Situation: USSR, Review of 1980 and Outlook for 1981, (April, 1981); USDA, USSR, Review of Agriculture in 1981 and Outlook for 1982 (May, 1982); USDA, USSR World Agriculture Regional Supplement, Review of 1982 and Outlook for 1983, (May, 1983); U.S. Congress, Joint Economic Committee, The Soviet Economy in the 1980's; Problems and Prospects, "The Food Program: A New Policy or More Rhetoric?" (December 1982); USDA, Farmline, "Soviet Food Program: A Feast of Optimism," (March 1983), The ACES Bulletin, "The Soviet Food Program: Prospects for the 1980's," (Spring 1983); and Foreign Service Journal,"Up on the Farm, the Soviet Food Program," (November 1983).

Although Soviet investment policy towards the program is still unclear, the program may represent a real commitment of Soviet assets. Portions of the program are being cited for this year's improved agricultural performance, and it seems unlikely that the program would continue to receive the fanfare that it does without the leadership taking the measures necessary to insure success. Thus, while there are ideological, economic, and social shortcomings that hamper the implementation of the program, it should be a positive factor in Soviet production for the remainder of the decade.

Background on the Food Program

On May 24, 1982, the Central Committee of the Communist Party approved a "Food Program" to be in place until 1990. It represents the latest step in a decades-old effort to raise USSR agricultural production. Its aim is to significantly increase per capita consumption of most high-quality food products, although even in 1990, supplies of meat, dairy, and fruits, would still fall short of the consumption norms established by the Soviet Institute of Nutrition (table 2).

The new Food Program addresses problems that have been at the center of Soviet Government attention in varying degrees since 1965. Insufficient returns on investment, neglect of agricultural technology, management problems, and inappropriate price policies for agricultural commodities were addressed in General Secretary Brezhnev's first major policy speech on agriculture (March 1965), and these same themes returned in his agricultural valedictory when the "Food Program" was adopted.

Although USSR statistics would indicate that Soviet citizens are among the world's best-fed people when total calories are counted, the Soviets have long been without the high-quality food products that their citizens desire. Shortages of meats, dairy products, and fruits and vegetables have been an increasing cause of consumer discontent. This situation seems apparently had become so prevalent that by 1981 even General Secretary Brezhnev admitted "...the problem of food is, on the economic and political level, the central problem of the whole [1981-85] 5-Year Plan." And, under Yuri Andropov, the emphasis remains on the "Food Program" as first priority in raising the standard of living of the Soviet people.

An Integrated Effort at Efficiency

Touted as a "radical solution" to their nation's food problem, the Food Program envisages creating an integrated agro-industrial complex to coordinate the planning, financing and management of the agricultural sector, those industries serving it, and the downstream production and marketing facilities. In short, it views the agricultural solution as a vertical one, embracing all activities "from farm to store."

Certain management elements suggest the Soviets may be borrowing from their more successful sectors. At the Council of Ministers level, for example, they created a Commission for the Agro-Industrial Complex, an organization that seems at least superficially similar to the Military Industrial Commission that coordinates the defense and civilian sectors in fulfillment of the USSR's defense plans.

At lower levels, they have been creating oblast and republic agro-industrial associations to overcome the bureaucratic barriers that currently compartmentalize agricultural management. Some 3,000 similar associations, called RAPO's in the Russian acronym, have been created at the rayon (i.e., county) level. The idea is an

integrated complex that can become an independent entity for planning. The structure allows for continued central control, while at administrative centers closer to production, the scope for local initiative and involvement is expanded.

On the state and collective farms themselves, the Soviets are establishing "collective contracting teams," groups of workers who would be assigned tracts of land, equipment, inputs, and so on, with wages paid in the form of an advance against the harvest. Formerly, workers were paid on a "piece rate" basis--a tractor operator on the basis of area plowed, for example--so that few individuals had any financial interest in the final outcome. Recently, Moscow News reported that contract teams routinely obtain 20-30 percent more produce per hectare than do workers paid in the traditional way.

As in the past when food supplies became short, the Food Program emphasizes the private plots and subsidiary holdings of enterprises as a quick way to increase production. Though the private plots represent only 1.4 percent of all Soviet farming lands, they produce about 30 percent of the meat, milk and eggs, 60 percent of the potatoes, and over 50 percent of the fruits and berries. Whereas individuals formerly risked stiff penalties for keeping excess livestock, a decree issued in January 1981 imposes no limitations on the number of livestock belonging to private plot holders, so long as the animals are raised under contract with state and collective farms. These farms, in turn, can sell this privately-produced output to the State procurement agencies and count it against their own plan fulfillment goals.

Other elements of the Food Program include revisions in the State procurement prices. While bonuses were once paid for above-plan sales, under price reforms undertaken in 1981, they now would be paid when sales exceed the average annual level obtained in the Tenth 5-Year Plan. This way, bonuses would correspond to increased output, and not necessarily flow to those who negotiate a easily-reached plan target. Finally, procurement prices were raised on January 1, 1983 for cattle, pigs, sheep, milk, grain, sugar beets, potatoes, vegetables and some other products. Additional payments will go to low-profit farms, and farm debts can be forgiven or rescheduled, all in hopes of providing more incentive and in making agriculture more productive.

The Food Program also has a trade policy connection originating in the partial U.S. embargo of 1980. That embargo, from the standpoint of U.S. government policy, placed a much larger burden on the U.S. domestic economy than it did on the Soviets. While a wide range of views can be found on the impact of the embargo on the Soviet economy, most assessments show that the embargo's effect on the USSR was more than trivial. It probably caused some short-term economic hardship, and altered Soviet policy -- generally to the detriment of the United States. Certainly the Soviets reacted in ways that indicated they considered the embargo a serious threat. They searched the world for additional grain, negotiated long-term agreements with alternative suppliers, reduced feed use in 1980, and drew down stocks. While the Soviets were understandably not anxious to reveal any difficulties the embargo may have caused them, General Secretary Brezhnev was quite frank in citing the Food Program as a necessary countermeasure to efforts by "some countries" to pressure Soviet foreign policy through grain sales.

Further, at the June (1983) Central Committee plenum, General Secretary Andropov noted that the Food Program's objective was to secure the population with quality foodstuffs "without any interruptions" and with the "greatest possible self sufficiency."

Negative Influences

Those who dismiss the Food Program's effect on future agricultural production see a number of shortcomings. First, those elements aimed at increasing money wages in the USSR may not actually bring forth much additional production. A central problem in the Soviet economy is that consumer goods have been so lacking that increased money incomes do not necessarily mean a better life. Second, the private plot initiative may be helpful, but as in most countries, the Soviet Union faces a strong outward migration from rural areas. This transition from a rural to an urban society continues in the USSR, and the accompanying fundamental changes in lifestyle are not easily countered by the opportunity to invest more of one's free time in animal husbandry. Third, Soviet ideology tends to run against the decentralizing theme of the Food Program. For example, Selskaya zhizn (September 14, 1983), reported that the aforementioned Commission for the Agro-Industrial Complex--this being the 15-man body headed by the Deputy Chairman of the USSR Council of Ministers and composed of the highest-ranking members of the national ministries and industries engaged in the production, planning, and marketing of food--recently approved work done by "amateur rabbit and fur-breeders' societies" at a very local (oblast, interrayon) level. In a program designed to bolster local initiative, this may represent the incapacity of central planners in Moscow to delegate any significant authority. Finally, and perhaps most importantly, published investment targets for the Eleventh 5-Year Plan (1981-85) call for a major reduction in investment in those industries serving agriculture -- from 71 billion rubles (about $99 billion in 1976-80), to 43 billion ($60 billion) (table 3). If the objective is increased productivity, one would expect investment in such areas as fertilizer production, farm machinery facilities, and food processing and packaging to increase.

On the other hand, the Food Program continues to receive such extended Soviet domestic coverage that it is hard to believe the leadership has not made the adjustments in resource allocation needed to insure that the Food Program shows progress.

Positive Influences

Perhaps of greatest significance is a series of decrees that signal a change in priorities favorable towards those industries serving agriculture.

On April 10, 1983, Pravda reported a Council of Ministers decree that addressed the wellworn complaints about the poor reliability and short service life of Soviet agricultural machinery. It directed ministries, which because of their overlap with the military typically enjoy the highest claims on Soviet resources -- the Ministries of the Aviation Industry, Ferrous Metallurgy, Electronics, Instrument Making, and others -- to ensure that better quality materials and subassemblies be delivered to the Ministry of Tractor and Agricultural Machine Building during 1984-1990. The decree calls the re-equipping of agriculture a "priority task of great economic and political significance."

A second decree on May 7th announced increased output of consumer goods in 1983-85. The consumer goods target for 1983 was apparently increased by 2.8 billion rubles. The Soviet press linked the Food Program with this planned increase in consumer goods calling the two "the pivot of the social program" ratified by the 26th Party Congress. Again, the press did not specify where the additional funding for the extra output would originate.

Most recently, on July 22, 1983, Pravda published still another decree that specifically establishes, as one of the main indicators of performance for enterprises and organizations serving agriculture, the actual increase in agricultural production on state and collective farms. Failure to fulfill contracts between the production ministries, the service enterprises, and the state and collective farms are to result in various financial penalties and fines.

Is the Program Showing Results?

If 1983 is primarily a year of putting the program in effect, then it would not be unreasonable to see a response in production beginning in 1984. However, the Soviet press is starting to attribute this year's improved prospects to the Food Program.

In speeches associated with "Agricultural Workers' Day," USSR Minister of Agriculture V.K. Mesyats noted the rapid expansion of the "collective contract" wage system. Since March, the number of collective contract teams apparently doubled, and are now responsible for 40 million hectares (about 18 percent) of arable land. The better coordination between farms and supply agencies--the reason for the creation of the RAPO's--is also being cited as having a good effect on this year's results.

More concrete statistics covering USSR industrial food and agricultural inputs for the January-September 1983 show significantly improved performance. Production of mineral fertilizer, for example was running 9 percent above that during the same period in 1982, tractors and agricultural machinery, 6 percent above, machinery for livestock and feed production, 6 percent, and pesticides, 5 percent. Output statistics for the industrial production of meat, milk, butter, and vegetable oil were also higher (table 4).

As a result of these improvements, a grain crop estimated by USDA to be about 200 million tons, substantially more forage, and record livestock numbers on state and collective farms, we expect to see Soviet statistics of gross agricultural output for 1983 surpassing the record of 1978. If the Soviet leadership is really interested in showing Food Program results, they might publish grain production for the first time since 1980.

Soviet Agricultural Production and Trade Prospects

In "U.S.-USSR Grain Trade," a paper prepared for the Joint Economic Committee's compendium, Soviet Economy in the 1980's: Problems and Prospects, ERS East Europe-USSR Branch authors projected USSR grain supply and utilization through 1987/88. That paper forecast gradually increasing Soviet grain production, rapid stock rebuilding, and fairly large requirements for grain feed.

During the summer of 1982 when that paper was written, it seemed a reasonable assumption that the Soviets would take advantage of low wheat and corn prices, and would try to minimize their exposure to outside influences by a rapid replenishment of stocks. However, they generally did not do so. Perhaps the continued abundant world wheat supplies will cause rebuilding to take place at a more leisurely pace. The Food Program seems to be especially effective in expanding production of non-grain feeds--pasturage, silage and hay--and in the expansion of pulses, all of which suggests a modest reduction in the grain-for-feed projections, and a gradually declining grain-import requirement for the USSR.

Our projections show increasing domestic grain production with probable large year-to-year variations, although the increase in summer fallow should moderate the wide swings of the late 1970's. By the end of the the decade Soviet grain production could average 220-230 million tons.

A successful Food Program could alter the composition of Soviet agricultural imports in ways beside diminishing the demand for imported grain. For example, the Soviets seem to be taking measures to improve the protein imbalance in animal rations. Domestically, this is being achieved by the expanded production of pulses, and by expanded feeding of oilmeals. By 1990, the Soviets should be feeding about 9.5 million tons of oilmeal (soybean meal equivalent) of which probably more than 5 million would be imported as beans or meal. Now, they feed about 6.6 million tons, about 3 of which is imported. Similarly, expanded meat output should reduce Soviet meat imports going from about 900 thousand tons in the early 1980's to about half that much by the end of the decade.

The less-costly management changes incorporated in the Food Program could show generally short-lived results. To bring about long-term improvements it would seem essential to increase investment in the agro-industrial complex, particularly in the marketing and distribution areas, and in providing agriculture with more and better inputs. Imports of agricultural technology embodied in machinery, pesticides and herbicides, the techniques and components for their manufacture, hybrids and breeding stock, could come to the fore.

Under a 1973 bilateral agreement covering cooperation in the field of agriculture (still in force but generally dormant after 1980), the Soviets have been especially interested in U.S. research in genetic engineering, remote sensing, swine hybridization, poultry breeding, and soil mechanics. In contacts with private firms, the Soviets have been interested in learning more about the use of soybean meal in animal rations, the use of soy isolates as meat extenders, and specific application techniques for certain herbicides and pesticides. Finally, the recently completed "Agribusiness-USA" exhibition in Moscow provided further information on agricultural technology being sought by the Soviets. This exhibit, the first all-U.S. show of its type in 6 years, involved more than 100 U.S. companies. Soviet visitors to the exhibit included high-level officials from various ministries as well as a large contingent of end-users who normally would not have access to import-potential agricultural technology. Interests centered on a wide range of technologies dealing with cultivation and soil conservation; veterinary medicines, instruments, and methods for their production; mechanized equipment for cultivation, harvesting, and storage of grain, row crops, and fodder; irrigation and land improvement devices; agrochemicals, especially plant protectants and growth regulators; and processing and packaging equipment for meat processing plants and dairies.

These kinds of exhibits and interests suggest long-term considerations possibly beyond those of the Food Program itself. This interest in infra-structural development would probably rise to prominence in the Twelfth 5-Year Plan not expected to be announced before 1985. The degree to which the Soviets can acquire this technology and absorb it without sacrifices in other sectors is unknown.

Mr. Chairman, I appreciate this opportunity to appear before you, and I'm prepared to answer any questions you or any other Members of the Committee might have.

Table 1--U.S. trade with the USSR, 1972-1983*

Year	U.S. exports			U.S. imports		
	Total	Agricultural	Nonagricultural	Total	Agricultural	Nonagricultural
	(Million dollars)					
1972	542	430	112	88	4	84
1973	1,191	920	271	204	5	199
1974	607	300	308	334	9	326
1975	1,834	1,133	701	243	7	236
1976	2,306	1,487	819	215	8	206
1977	1,621	1,037	584	221	11	210
1978	2,249	1,687	563	530	12	517
1979	3,604	2,855	749	873	15	858
1980	1,510	1,047	463	431	10	421
1981	2,430	1,665	765	357	12	345
1982	2,589	1,855	734	229	11	218
1983**	2,200	1,600	600	350	10	340

* Not adjusted for transshipments. ** Projection.

Table 2--USSR: Rational consumption norms for and per capita consumption of basic food products, 1982 and 1990

Item	Rational per capita consumption norms issued in 1981 *	Per capita consumption in 1982 **	Planned consumption per capita in 1990 ***
	(kilograms)		
Meat and meat products	78	57	70
Fish products	18.2	18.4	19
Milk and milk products	405	295	330-340
Eggs (in units)	292	249	260-266
Sugar	40	44.5	45.5
Vegetable oils	9.1	9.3	13.2
Vegetables and melons	130	101	126-135
Fruits and berries	91	42	66-70
Potatoes	110	110	110
Bread products	115	137	135

* Planovoye khozyaistvo, No.10, 1981, p. 17.
** SSSR v tsifrakh (USSR in Figures), 1982, p.197.
*** Pravda, May 27, 1982, p. 1.

Table 3--Capital investment in agro-industrial complex, 1976-85

Period	Total Complex	Agricultural Sector *	Related Industries **
	(Billion rubles)		
1976-80 actual	241.9	171.0	70.9
1981-85 plan	233.0	190.0	43.0
1981-85 plan (annual average)	46.6	38.0	8.6
1981 actual	44.2	36.7	7.5
1982 actual	45.0	37.4	7.6
1983 plan	47.0	37.7	9.3

* Includes state and collective farms and intra-farm enterprises.
** Includes input industries such as farm machinery, fertilizers, pesticides, and preliminary processing industries such as sugar refining, cotton ginning and wheat milling.
Source: Compiled from official Soviet data by USDA and reported in USSR: World Agricultural Regional Supplement, Review of 1982 and Outlook for 1983.

Table 4--USSR industrial food and agricultural input performance January-September, 1980-83

Item	1980	1981	1982	1983
	(million metric tons unless noted otherwise)			
Mineral fertilizers (100 pct. nutrient basis)	NA	19.8	20.3	22.2
Pesticides, (standard units)	.359	.379	.398	.420
Agricultural machinery (billion rubles)	2.0	2.1	2.5	2.6
Machinery for livestock and feed production (billion rubles)	1.6	1.6	1.7	1.8
Meat (state resources)	6.6	6.8	6.7	7.3
Whole milk (state resources)	19.1	19.6	19.9	21.1
Butter (state resources)	1.1	1.0	1.1	1.2
Vegetable oil (state resources)	1.8	1.7	1.7	1.8

Source: Compiled from official Soviet statistics by U.S. Agricultural Attache, Moscow.

THE UKRAINIAN ECONOMY PRIOR TO WORLD WAR I AND AT THE PRESENT

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I

The Ukraine was integrated politically and economically into the Russian Empire in the middle of the eighteenth century. From that time up to the 1917 Revolution, the Ukraine was an integral part of the Empire's national economy. Since the Revolution, the Ukraine has been organized into a constituent republic of the USSR, and the Kiev government has, nominally, been vested with extensive political and economic prerogatives. In reality all decision-making powers have been concentrated to an extreme in the hands of the central authorities in Moscow. The republic has been unable to conduct its own economic policy as its interest have been subordinated to those of the USSR as a whole. Thus, the Ukraine continues to be an economic region of the integrated national economy of the USSR and will be considered as such in what follows.

As in the overwhelming majority of mergers between previously politically independent nations or through the absorption of one state by another, the integration of the Ukraine into the Russian Empire was undertaken for political reasons. For the USSR, the Ukraine was important for both political and economic reasons. Yet a political analysis is outside the scope of the present study. Of interest here is the effect of the Ukraine's membership in this larger political and economic entity on the region's economic development, particularly relative to the development of other regions of the Tsarist Empire and the Soviet Union and ultimately on the welfare of its population.

Ideally, in analyzing the effects of integration on the development of the Ukrainian economy, one of two investigations should be undertaken. First, economic development from the mid-eighteenth century until now should be simulated for the Ukraine as if it were an independent country. The obtained standard of living should then be compared with actual figures for the Ukrainian SSR. However, such an extrapolation would be extremely difficult to accomplish. For one thing, statistical data for the 18th and most of the 19th centuries are virtually nonexistent, and data for the most recent period are scarce. Furthermore, it would be necessary to include the effect on economic development not only of the growth of resources and technological progress, but also of various historical occurrences. The effect of the latter is quite difficult to estimate.

Second, an extrapolation might be undertaken in the opposite direction, from the present to the mid-18th century, comparing the results with the actual data for that period. For the same reasons as above, such an investigation is impossible.

There is, however, an element in the Ukraine's situation within the Tsarist Empire and its Soviet successor which allows us to focus our analysis. The Revolution of 1917 brought a radical change in political, social and economic structures within the former Empire's territory. With respect to economics, the market economy of a backward state had been replaced by a socialist or, more accurately, Soviet-type economy. At the same time, the Ukraine was retained within the jurisdiction of the new political and economic entity. In view of the continuing subordination of the Ukraine to the Moscow authorities, but taking into account the change in economic system, a modest question can be posed: What was the economic experience of the Ukraine under the new regime as compared with the prerevolutionary period? To answer this question, one must compare available variables for the Ukrainian economy for a year or a period before the Revolution and for the present period.

A direct comparison of variables for the Ukraine alone or of the changes in these variables for the Ukraine, other regions and other countries over a period of almost seven decades would not be methodologically sound. Such comparisons will be affected by the index number problem. To avoid the difficulty, following two questions can be asked: How has the Ukraine fared relative to other regions under the Tsarist market economy and under the Soviet socialism? And, what were the underlying reasons for the treatment of the Ukrainian economy by the central government in Moscow under both regimes? Obviously, to answer the latter question, only the variables affecting the Ukraine differentially relative to other regions need be considered. The systemic factors of equal importance to all regions need not be included in our analysis.

It is necessary here to emphasize that any relative improvement or deterioration found in the Ukraine's economic development or the welfare of its population cannot be attributed entirely to the change in the economic and political system. A host of factors occurring not only in the USSR but throughout the world could have differentially affected the Ukrainian economy. The following come readily to mind: the sectoral uneveness of technological progress, the discovery of new sources of raw materials, differential population growth, changes in consumer tastes at home and abroad, and economic and political objectives and policies of Moscow governments. The tools of economic analysis do not adequately allow for allocation of economic change to

individual factors in a given period. Therefore, for the purposes of this study we will have to assume that economic change in the Ukrainian economy, relative to that of other regions of the USSR, was primarily the result of the change from the Tsarist to the Soviet political and economic system. However, the possibility of the substantial influence of other factors must be allowed for.

Economic relations that exist among regions of the same country are manifold. We do not attempt here to discuss all of those relating to the Ukraine within the Russian Empire and the Soviet Union. Furthermore, no attempt is made to assess the effect of the Ukraine's political situation on its economy in the long run, for example, along the lines of the recent theories of structural and dependence imperialism. Our discussion is limited to the impact of the Ukraine's status on: the supply of public goods and on such issues of external trade as its volume, geographical distribution, structure, and economic rationality; the transfer of national income between the Ukraine and the central government in Moscow over the last one hundred years; and, finally, on the development of its economy and the welfare of its population, as shown by national income and national income per capita indicators.

The present analysis is undertaken on the basis of estimates prepared by the author and other researchers. The main purpose here is not so much the presentation of new estimates of relevant variables as an interpretation of the available evidence. Moreover, improvement on the available estimates cannot often be had in view of the lack of access to primary sources. To increase the reliability of our conclusions, we will base the discussion whenever possible not on a single estimate, but on the set of estimates of a particular variable prepared by various scholars. Therefore, no one estimate will be considered "correct," but confidence will be placed in the consistent trends among the estimates.

As indicated above, in this study the Ukraine is treated as an economic region. Geographical dimensions underlying the statistics presented here are specified when appropriate. Before the Revolution the bulk of the Ukraine was occupied by the Tsarist Empire. The remainder of the Ukraine was under Austria-Hungary -- East Galicia and Bukovyna directly under Austria and Transcarpathia under Hungary. The boundaries of the present-day Ukrainian economy are confined to the borders of the Ukrainian SSR, although it should be kept in mind that the republic does not encompass all Ukrainian ethnographic lands. The "Russia/USSR" denotes the political entities before and after the Revolution with central government in Moscow. The term "ethnic Russians" refers to

the Russian nationality, their territory is called "ethnic Russia" or "the Russian SFSR" after the Revolution. It should be noted that the RSFSR is home to a number of ethnic groups besides Russians.

II

In theoretical terms, an integration of two or more previously independent nations should facilitate the production of public and private goods at a cheaper cost than was possible in the separate nations. An increase in integrated area should decrease costs even further. A further integration of individual nations may not be pursued in order to avoid the tension in the increased number of ethnic groups with respect to their preferences for nationalistic public goods. In purely abstract terms, one could argue, the USSR halted its territorial expansion at the size smaller than economically optimal in order to be able to accomodate the preferences for nationalistic public goods of already included nationalities. But the historical record shows that such preferences of non-Russian nationalities were neglected or overruled by the Moscow government even within the existing boundaries of Russia/USSR.

It appears that the Ukrainians have anticipated that their preferences for nationalistic public goods (political autonomy, culture, tradition) would not be respected when the Ukraine becomes incorporated into the Russian Empire and subsequently into the Soviet Union; they fought against the incorporation. The force had to be used by the government of the Russian Empire and of the Soviet Union to overrule the preferences of Ukrainians for political independence as a public good. After the incorporation, the preferences of Ukrainians for nationalistic public goods were not only ignored, but those of Russians were often imposed on them with the force of law. Certainly, one cannot argue that the public goods supplied by the Moscow government have maximized the ulility of Ukrainians. But there were exceptions among them. Some members of the former Cossack elite, through their support of the Tsarist government, relinquished their preference for nationalistic public goods in exchange for wealth and power. By the same token, Ukrainian members of the Communist Party have benefited from the Soviet regime to the same degree as their Russian counterparts as long as they abandoned their preferences for this kind of public goods.

The supply of private goods in the Ukraine was also affected by integration with Russian/USSR. This relationship is studied here only with respect to Ukrainian external

trade. The degree of the Ukraine's integration, as shown by the export-to-national-income ratio, increased between the prerevolutionary and present periods. Ukrainian trade with the rest of the USSR also increased during this period. The relative increase in trade between the Ukraine and other Soviet republics does not necessarily indicate greater integration with the entire USSR. In fact, the Ukraine trades primarily with the European USSR and very little with other Soviet regions. It is not clear to what extent economic considerations, which are usually of a more permanent nature, and to what extent easily reversible political considerations are responsible for the increase in this trade.

The commodity composition of Ukrainian external trade did not change radically under Soviet rule as compared with the prerevolutionary period. The Ukraine is no more an important exporter of unprocessed agricultural products, mainly grain, to European nations, but has increased its exports of mineral raw materials and industrial materials (essential for Soviet-type industrialization) to the European members of Comecon. As before, Ukrainian imports from abroad consist mainly of machinery equipment, transportation vehicles and equipment, and other processed goods. Domestically, the Ukraine now exports processed foods and industrial materials mainly to the European parts of the Russian Federation and receives in return various products of light industry, mainly textiles, machinery and such basic products as timber and oil.

The structure and geographical distribution of Ukrainian external trade before the Revolution and at the present time has not been determined entirely by scarcity relations. Long before the Revolution, the Tsarist policies influenced Ukrainian trade. Tax and railroad policies stimulated the export of grain to foreign countries. Tariff policies protected the growth of Donbas industries and reoriented the Ukrainian demand for processed consumer goods (textiles) from abroad to the domestic producers in Russia proper. On balance, consumer welfare in the Ukraine probably suffered from such government intervention.

Of course, under the Soviet regime government control over Ukrainian external trade became complete. Trade like all other economic sectors, became subordinated to the overall objectives of the Moscow leadership. We can agree with some Soviet Ukrainian economists that the present trade structure of their republic has a detrimental effect on the productivity of its entire economy, on regional development, and on the base of nonrenewable raw materials. They advocate change in the production structure, a precondition for change in the trade structure, recommending greater attention to the

growth of the machine-building branch, in which technological progress advances faster than in other industrial branches. However, Ukrainian exports to the Comecon countries are the tool for binding their economies to the Soviet economy. On the other hand, the interrepublic trade of the Ukraine is subordinated to the overall economic objective of the Soviet Unions -- a rapid build-up of the Asiatic regions of the Russian SFSR. Thus it appears that the structure of the Ukraine's economy and consequently of its external trade will remain unchanged as long as the geopolitical objectives of the Moscow leaders continue unchanged.

For about half of the century prior to the Revolution, a period for which data are available, the Ukraine's contributions to the state budget exceeded its receipts from it by about 3 percent of the region's net material product. The transfer of funds from the Ukraine is confirmed by its positive balance of trade with other countries of the world and with the rest of the Empire, at least for the few years for which such calculations can be made. After the Revolution both before and after the Second World War, the outflow of national income from the Ukraine continued. Transfers were now relatively greater than during the prerevolutionary period, ranging between 10 and 20 percent of the net material product, depending on the period and methodology of calculation. In contrast to other cases of transfers of funds from one country to another or from one region to another, the Ukrainian funds were appropriated outright by the Moscow government. Moscow did not ask the Ukrainian population's approval, paid no interest, and had not intention of returning the funds. The policies of the central authorities were primarily reflected in the declining Ukrainian portion of total USSR investment, which had been below the region's population most of the Soviet period.

One possible use for the transferred Ukrainian resources may have been in the development of backward regions of Russia/USSR. This consideration applies primarily to the Soviet period. During the postrevolutionary period until the late 1950s, an interregional equalization trend could be observed. The transfer of the investable funds from the Ukraine could have been of some importance here. Since the fifties, however, interregional inequality has again been on the rise. Another use of Ukrainian funds may have been associated with the effort to maximize output for the entire USSR. The data for the Ukraine, the Russian SFSR and Kazakhstan show that during various periods since the late 1920s republics with high productivity growth in industry or agriculture did not always receive investment shares greater than population shares in the total USSR.

Since neither interregional equalization not output maximization in Russia/USSR

seem to have been decisive for the Ukraine's loss of funds, some authors have sought the cause in ethnic considerations. They argue that the Moscow government, dominated by Russians, used Ukrainian resources for the development of Russian regions. This hypothesis can be questioned on various grounds. Before the Revolution, the excess of budget receipts over budget payments was registered by most of the border gubernias as well as the gubernia in which the country's capital was located. Most of the Russian gubernias, just as Ukrainian ones, paid more to the state budget than they received from it. After the Revolution, several Russian oblasts were shown to have the lowest standard of living in the country. The investment per capita was not higher in the Russian SFSR as a whole, but only in its Asiatic regions. Finally, Russians account now for about one-fifth of the Ukraine's population. Any economic discrimination against the Ukraine would affect its Russian minority to the same degree as ethnic Ukrainians.

It appears that the reason for the appropriation of Ukrainian resources by the Moscow government must be sought in the military and political concerns of the Tsarist Empire and subsequently of the USSR. Before the Revolution the Ukraine as an economic region supplied funds for the political integration of the far-flung Empire and for the build-up of the railroads for military purposes. For the same reasons, since the early 1930s, the USSR has turned its attention to the development of the Ural regions and, following World War II, to the development of Western and Eastern Siberia, Far East and North Kazakhstan. The determination to go on with such policies, to the continued detriment of Ukrainian economic development, can be seen in the construction of the Baikal-Amur Magistrale and the construction plans for several territorial production complexes in the Asiatic part of the Russian SFSR.

The effect of the Ukraine's incorporation into Russia/USSR and of its continuous loss of resources on total income and on income per capita in the Ukraine, relative to the rest of the country, is studied for 1913, 1970, and 1980. To compare these indicators in the two periods, one must establish the population base. While information on the present population of the Ukraine is reliable, the same is not true for the prerevolutionary benchmark year. The official estimates by TsSU of the 1913 population on the territories of the present Ukrainian SSR are about 10 percent lower than our estimates derived on the basis of Tsarist TsSK data and of the Leasure-Lewis methodology. Despite the fact that the latter estimates may be slightly inflated, they seem preferable to the TsSU estimates, for which no methodology of derivation is divulged. It is possible that the retaining of lower estimates for 1913 may be a

deliberate attempt by the Soviet authorities to blunt the tremendous population losses which occurred in the Ukraine under Soviet rule.

To facilitate our comparison, the Ukrainian national income for 1913 and 1970 was calculated according to the same methodology as the national income for Russia and the USSR, respectively, in these years. The reliability of derived indicators for the Ukraine is not the same for the two years. The statistical foundation, especially for the Western Ukraine, in 1913 is very poor compared with that for 1970. The 1913 result should be considered as preliminary. Our comparison should not end with the year 1970. The last decade witnessed a considerable deceleration in the Ukrainian growth rate relative to other Soviet republics. No independent estimation of the Ukrainian national income can be undertaken for the most recent years because of a considerable decline in the availability of statistical data for the Ukraine since the early seventies. Therefore, our analysis of the most recent year, 1980, must be made on the basis of Soviet national income data.

A comparison of our indicators for the Ukraine and Russia/USSR over sixty or seventy years would not be meaningful because of the index number problem. Therefore comparison is made between the situation of the Ukraine relative to the rest of the Tsarist Empire in 1913 and its present situation relative to the rest of the USSR. With respect to population, the Ukrainian share decreased by about 4 percentage points during the period under discussion. The Ukraine decreased its share in the Russia/USSR national income by 2 to 3 percentage points between 1913 and 1970. During the decade of the seventies the share dropped by additional 2 percentage points. With respect to individual sectors, Ukrainian shares behaved differentially: agriculture increased while industry decreased in importance within the USSR. An especially severe decline can be observed in the shares of other Ukrainian material production branches. The service sector's share declined in terms of fixed capital but increased slightly in terms of employment. The most plausible explanation for this behavior of Ukrainian economic sectors again concerns the emphasis of Soviet planners on the development of some Asiatic regions of the USSR.

Usually, the national income per capita is assumed to be an indicator of the public welfare and of productive capacity. In the case of the USSR, including the Ukraine, it is more an indicator of productive capacity, because of the relatively high share of investment and government expenditures in the total national income. Keeping in mind this qualification, one can say that the Ukraine's standing relative to the Western

advanced countries improved between 1913 and 1970 in terms of national income per capita. The lead of such countries as the United States or Great Britain over the Ukraine was cut by more than one half; in general, the Ukraine reached approximately Italy's level of economic development. With respect to the other union republics of the USSR, until 1970 improvement in the Ukraine's economic standing was achieved at the cost of a relatively greater decline of its population share than of its national income share in the USSR total. During the seventies the Ukraine dropped back to its 1913 levels in this respect. As a result, its ranking declined from its usual fifth to seventh place in income per capita among the fifteen union republics.

III

One can conclude that, particularly with respect to the Ukraine, the regional policy that existed under Tsarist capitalism before 1917 continued largely unchanged under the Soviet system. Under both regimes, this policy was guided by the geopolitical demands of the state as perceived and acted upon by the central leadership. This finding seems to confirm the prediction by Max Weber, made before the emergence of the first socialist state, as well as the conclusion reached recently on theoretical grounds, by Thomas Weisskopf that there should be no difference in defense economics between a capitalist and a socialist state. Furthermore, the relatively smaller drain on the Ukraine's economy before 1917 than after the Revolution suggests that a region can better defend its own economic interests against those of the central authorities under a capitalist than under a socialist system of government.

At various times during the last one hundred years, the Moscow leadership fostered the development of the Ukrainian economy, particularly its heavy industry. Some Ukrainian regions, mostly those with conditions favorable for heavy industry, benefited from this policy, and are now among the most advanced in the USSR. There are probably other economic benefits (noneconomic advantages or disadvantages are outside the scope of this discussion) which the Ukraine has enjoyed as a result of being a part of Russia/USSR. Those which come readily to mind are economies of scale, the opportunity for migration to Asiatic territories, and the relative certainty of supply of some key products (oil, timber). Yet it seems safe to assume that the Ukrainian economy, because it could not make its own decisions in such areas as external trade, economic structure, and disposal of national income, was harmed more than helped by these benefits. Had

the Ukraine been able to make these and other economic decisions with its own interests in mind, the growth rate of its economy and the welfare of its population would undoubtedly have improved. As part of the USSR, the Ukraine has on balance barely maintained the relative economic position it attained prior to World War I.

Were the Ukraine just another region in an ethnically homogeneous country, the most one could say would be that its treatment by the central government has been highly inequitable. But the Ukraine is inhabited mainly by Ukrainians, a people different from ethnic Russians, the dominant nationality in Russia/USSR. Furthermore, Ukrainians did not join either Tsarist Russia or the USSR voluntarily. There is an obvious need, then, to define the economic status of the Ukraine, as the country of a distinct ethnic community.

A rather general definition states that whenever there is "any relationship of effective domination or control, political or economic, direct or indirect, of one country over another" (Benjamin Cohen), a case of imperialism exists. Of course, according to this definition the Ukraine has been Moscow's colony for more than three hundred years. Another, narrower definition helps to focus on the economic aspect of the Ukraine's situation. According to Kenneth Boulding, economic imperialism between countries exists when a transfer of national income takes place from the weaker to the stronger country under threat of force. Such an unequal relationship can also exist between regions inhabited by two different nationalities within a country. National income transfers from the weaker to the stronger region--which are legal though not legitimate--precisely characterize the economic relations between the Ukraine as a colony and Moscow as a metropolis.

Since the Ukraine has experienced an economic disadvantage relative to other regions of Russia/USSR, and in terms of national income an outright economic loss, the question is who, specifically, has gained from this situation. There is no conclusive evidence that other ethnic groups or especially ethnic Russians have benefited at the expense of Ukrainians. As for otner aspects of social life, no single factor can explain such treatment of the Ukrainian economy. Undoubtedly, all the factors we have discussed have had a certain influence on determining the Ukrainian economy's role within Russia/USSR. But in view of the importance of defense considerations both for the Tsarist Empire and for the Soviet Union, one could argue that the state's geopolitical interests have dominated regional policy decisions, including those relevant to the Ukraine.

Neither the Tsarist nor the Soviet regime has been a parliamentary democracy in the Western sense. Their leaders have not been elected by popular vote, and the policies of these leaders have not represented a compromise among vested interests or the views of the population. Rather, in both regimes, policies reflected the interests of the ruling class or ruling elite. In the Russian Empire the ruling class consisted of a hereditary landed aristocracy and military establishment, which led Lenin and his followers to call the regime military-feudal. In the USSR the power to control every phase of human life has been monopolized in the hands of the multi-ethnic leadership of the Communist Party, a regime sometimes aptly described as a partocracy. In my view, the relationship between the Ukraine as an economic colony and the Moscow metropolis can be defined largely by the existence and interest of this ruling class or elite ("the new class," in Milovan Djilas' terms).

The government in Tsarist Empire and the USSR, as an exponent of the ruling class or the ruling Party, has used the Ukrainian economy and extracted its resources to provide a strong defense capability for the country. Being relatively secure from external threat, this class or elite has retained power in hands readily and has enjoyed considerable benefit from its position.

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